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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,715

02/01/2006

Bodo Mittler

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OSRAM SYLVANIA INC
100 ENDICOTT STREET
DANVERS, MA 01923

EXAMINER

WALFORD, NATALIE K

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,715	Applicant(s) MITTLER, BODO	
	Examiner NATALIE K. WALFORD	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/06 and 6/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claim 2 is objected to because of the following informalities:

Claim 2 recites the limitation "the coating" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 13-15, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mittler (EP 1,111,655). For examination purposes, the English equivalent of Mittler will be used (US 6,624,576).

Regarding claim 1, Mittler discloses an electrode system in figure 1, in particular for the lamp industry, comprising at least one foil (item 5) as a first part of the electrode system having a metallic base body of molybdenum (column 3, line 39), pure or doped, and a pin-like supply

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conductor (item 4) made from metal as second part of the electrode system, predominantly or completely comprising molybdenum or tungsten (column 3, lines 36-37), the two parts being joined to one another, characterized in that a join is realized between the pin-like supply conductor at its end facing the foil (see FIG. 1) and the foil by combined welding and soldering as a result of at least one central welded region being surrounded by a halo (item 7) of a high-temperature soldered join (see FIG. 1). The Examiner notes that regarding claim 1, the claim is directed to the method of manufacturing an electrode system, in view of an absence of a showing that the method imparts distinctive structural characteristics to the final product, the limitations directed to the method of manufacturing are not germane to the issue of patentability of the device.

Regarding claim 2, Mittler discloses the electrode system as claimed in claim 1, characterized in that the coating consists of pure ruthenium or a ruthenium compound or alloy (column 2, lines 48-52), in particular a eutectic molybdenum-ruthenium alloy, with a layer thickness of between 0.02 and 5 μ m (column 2, lines 42-45).

Regarding claim 3, Mittler discloses the electrode system as claimed in claim 2, characterized in that the coating is applied to the foil, in a layer thickness of between 0.02 and 0.1 μ m (column 2, lines 42-45).

Regarding claim 4, Mittler discloses the electrode system as claimed in claim 2, characterized in that the coating is applied to the supply conductor, in a layer thickness of between 0.1 and 5 μ m (column 2, lines 53-57).

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Regarding claim 5, Mittler discloses the electrode system as claimed in claim 1, characterized in that the pin-like supply conductor, at its end facing the foil, has a flattened portion (see FIG. 1), in the region of which the join to the foil is made (see FIG. 1).

Regarding claim 6, Mittler discloses the electrode system as claimed in claim 1, characterized in that the welded region is in the form of a spot, a circle or elongate in form (see FIG. 1). The Examiner notes that regarding claim 1, the claim is directed to the method of manufacturing an electrode system, in view of an absence of a showing that the method imparts distinctive structural characteristics to the final product, the limitations directed to the method of manufacturing are not germane to the issue of patentability of the device.

Regarding claim 7, Mittler discloses the electrode system as claimed in claim 1, characterized in that two welded regions are used to produce the join (see FIG. 1). The Examiner notes that regarding claim 1, the claim is directed to the method of manufacturing an electrode system, in view of an absence of a showing that the method imparts distinctive structural characteristics to the final product, the limitations directed to the method of manufacturing are not germane to the issue of patentability of the device.

Regarding claim 8, Mittler discloses the electrode system as claimed in claim 1, characterized in that a coating (column 2, lines 48-52), in particular a ruthenium-containing coating (column 2, lines 42-46), is at least partially applied to at least one of the two parts.

Regarding claim 9, Mittler discloses the electrode system as claimed in claim 1, characterized in that the flattened portion is from 50 to 200 μm thick (column 4, lines 35-37).

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Regarding claim 10, Mittler discloses the electrode system as claimed in claim 1, characterized in that the pin-like supply conductor has a diameter of from 0.1 to 0.6 mm (column 3, lines 12-16).

Regarding claim 11, Mittler discloses the electrode system as claimed in claim 1, characterized in that a further supply conductor (item 4) is secured to the foil in a similar way (see FIG. 1).

Regarding claim 13, Mittler discloses the electrode system as claimed in claim 1, characterized in that the spot welded join has a diameter of at most 150% of the diameter of the pin-like part (see FIG. 1).

Regarding claim 14, Mittler discloses the electrode system as claimed in claim 1, characterized in that the diameter of the halo amounts to at most 130% of the diameter of the spot welded join (see FIG. 1).

Regarding claim 15, Mittler discloses a lamp (item 1) comprising the electrode system as claimed in claim 1 (see FIG. 1).

Regarding claim 17, Mittler discloses a process for producing a join between parts of an electrode system in figure 1 which includes at least one foil (item 5) as first part and a pin-like supply conductor (item 4) as second part, characterized by the following steps: providing the two parts as joining partners (see FIG. 1); producing mechanical contact between the two joining partners (see FIG. 1); contactless welding of the two joining partners by means of high-energy radiation (column 2, lines 53-57), so that the introduction of heat is sufficient to form a central spot welded join which is surrounded by a halo (item 7) of a high-temperature soldered join (see FIG. 1).

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Regarding claim 18, Mittler discloses the process as claimed in claim 17, characterized in that the second part is arranged on that side of the first part which faces the radiation (see FIG. 1).

Regarding claim 19, Mittler discloses the process as claimed in claim 17, characterized in that the pin-like supply conductor is flattened at its end which is to be joined prior to mechanical contact being made (see FIG. 1).

Regarding claim 20, Mittler discloses the process as claimed in claim 17, characterized in that at least one of the two parts is coated with a material which promotes the soldering, in particular ruthenium-containing material (column 2, lines 48-52), before mechanical contact is made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mittler (EP 1,111,655) in view of Irisawa et al. (US 5,962,976). For examination purposes, the English equivalent of Mittler will be used (US 6,624,576).

Regarding claim 12, Mittler discloses the electrode system as claimed in claim 1, but does not expressly disclose that the foil is doped with yttrium oxide, in particular in an amount of from 0.5 to 1.5%, as claimed by Applicant. Irisawa is cited to show an electrode system in figure

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1 with a molybdenum foil (item 5) that is doped with yttria, in an amount of .05% (column 4, lines 6-9). Irisawa teaches that by doping the molybdenum foils with yttria, the recrystallization grains of the resulting foils are not more 50 microns in size (column 4, lines 6-9).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mittler's invention to include the foil is doped with yttrium oxide, in particular in an amount of from 0.5 to 1.5% as suggested by Irisawa for having the recrystallization grains of the resulting foils be small.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mittler (EP 1,111,655) in view of Marlor et al. (US 6,674,001). For examination purposes, the English equivalent of Mittler will be used (US 6,624,576).

Regarding claim 16, Mittler discloses a lamp (item 1) comprising a lamp vessel (item 2) made from quartz glass or hard glass (column 3, lines 31-32), which at least at one end is provided with a pinch seal (column 2, lines 58-65) and with inner and outer current feeds (item 4) and contains a luminous means (item 2) and if appropriate a fill, the lamp being provided with at least one electrode system as claimed in claim 1, characterized in that the supply conductor is realized by the outer current feed (see FIG. 1), inner current feed (see FIG. 1) or if appropriate an electrode shank, but does not expressly disclose that the quartz glass or hard glass has a high SiO₂ content, as claimed by Applicant. Marlor is cited to show an electrode system in figure 1 with a quartz glass (item 11) that has a high SiO₂ content (column 2, lines 30-32). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the quartz glass or hard glass has a high SiO₂ content, since it has been held to be within the

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general skill of a worker to select a known material for the purpose of using the glass as a bulb in a lamp.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012. The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nkW
/Natalie K Walford/
Examiner, Art Unit 2879

/Sikha Roy/
Primary Examiner, Art Unit 2879

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